

AMENDMENT TO THE CLAIMS

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D/ 1. (Currently Amended) ~~A disc drive~~ An assembly comprising:  
a ~~chassis;~~  
at least one disc;  
a spindle assembly rotationally supporting the at least one disc ~~relative to the chassis to form a flow field along a surface of the at least one disc via rotation of the at least one disc;~~  
a head assembly ~~including a suspension supporting at least one head positionable proximate to the disc surface of the at least one disc;~~ and  
a flow controller supported in the flow field along the disc surface and the flow controller including a flow gate having a leading edge having a plurality of rows of inlets and a trailing edge including a plurality of rows of outlets and the flow gate including a plurality of rows of streamline flow passages between the plurality of rows of inlets at the leading edge and the plurality of rows of outlets at the trailing edge to reduce turbulence in the flow field.

2. (Currently Amended) The ~~disc drive~~ assembly of claim 1 wherein the ~~flow controller is a~~ flow gate is supported upstream of flow of the flow field to the head assembly.

3. (Currently Amended) The ~~disc drive~~ assembly of claim 1 wherein the ~~flow controller is a~~ flow gate is supported downstream of flow of the flow field from the head assembly.

4. (Currently Amended) The ~~disc drive~~ assembly of claim 1 wherein the flow controller includes a plurality of flow gates supported

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in the flow field along the disc surface of the at least one disc.

5. (Currently Amended) The ~~disc drive~~assembly of claim 4 wherein the plurality of flow gates includes an inflow gate to condition flow to the head assembly and an outflow gate to condition flow excited by the head assembly.

6. (Currently Amended) The ~~disc drive~~assembly of claim 17 wherein the plurality of streamline flow passages include circumferential radially spaced flow passages.

7. (Currently Amended) The ~~disc drive~~assembly of claim 6 wherein the circumferential radially spaced flow passages are formed of a plurality of radially spaced circumferential fins supported relative to the at least one disc.

8. (Currently Amended) The ~~disc drive~~assembly of claim 1 wherein the flow controller includes a honeycomb structure forming the plurality of rows of streamline flow passages.

9. (Currently Amended) The ~~disc drive~~assembly of claim 1 wherein the flow ~~controller~~gate includes a block structure including the leading edge and the trailing edge having the plurality of rows of inlets formed along the leading edge of the block and the plurality of rows of outlets formed along the trailing edge of the block and the plurality of rows of streamline flow passages therebetween.

10. (Currently Amended) The ~~disc drive~~assembly of claim 1 wherein the flow controller includes an array of tubes forming the plurality of rows of streamline flow passages.

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11. (Currently Amended) The ~~disc drive~~assembly of claim 1 wherein the head assembly is pivotally supported to move between an inner position and an outer position and a width of the flow ~~controller~~gate extends between the inner and outer positions of the head assembly to condition flow to the head assembly.

12. (Currently Amended) The ~~disc drive~~assembly of claim 1 wherein the spindle assembly supports a plurality of discs spaced to form a gap therebetween and ~~including at least one~~the flow ~~controller~~gate is supported in the gap between adjacent ~~discs~~the plurality of discs.

13. (Currently Amended) The ~~disc drive~~assembly of claim 12 ~~including~~wherein the flow controller includes a plurality of flow ~~controllers~~gates supported relative to the plurality of discs.

14. (Currently Amended) The ~~disc drive of claim 1 wherein~~A flow control assembly comprising:

a disc rotatable relative to a spindle axis to form a  
flow field along a surface of the disc; and

a flow controller supported in the flow field along the  
disc surface and the flow controller including a  
leading edge having a plurality of inlets and a  
trailing edge including a plurality of outlets and  
including a plurality of streamline flow passages  
and the plurality of streamline flow passages are  
curved between the inlets and the outlets of the  
flow passages to redirect the flow field.

15. (Currently Amended) The ~~disc drive~~assembly of claim 14 wherein the plurality of streamline flow passages are angled to direct the flow field inwardly toward an inner diameter of the ~~at least one disc~~.

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16. (Currently Amended) The ~~disc drive~~assembly of claim 14 wherein the plurality of streamline flow passages are angled to direct the flow field outwardly toward an outer diameter of the ~~at least one disc~~.

17. (Currently Amended) A ~~disc drive~~assembly comprising:  
at least one disc rotatable about a spindle axis and forming a flow field along a surface of the at least one disc and a head assembly supported relative to the surface of the at least one disc ~~to read data from or write data to the at least one disc~~; and  
a flow device in the flow field for reducing turbulent flow along the surface of the at least one disc including a plurality of streamline flow passages having a curved or arched contour.

18. (Canceled)

19. (Currently Amended) The ~~disc drive~~assembly of claim 17 wherein the flow device is supported upstream of flow of the flow field to the head assembly.

20. (Currently Amended) The ~~disc drive~~assembly of claim 17 wherein the flow device is supported downstream of flow of the flow field from the head assembly.

21. (Canceled)

22. (Canceled)

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23. (Currently Amended) In combination;

~~at least one~~ a spindle assembly including a plurality of stacked discs supported by a spindle assembly rotationally coupled to a chassis and rotatable to induce a flow field along a surface of each of the plurality of stacked discs by rotation of the at least one a plurality of stacked discs; and  
a plurality of flow devices supported in the flow field of each of the plurality of discs and each of the plurality of flow devices for each of the plurality of discs including a leading edge having a plurality of inlets and a trailing edge including a plurality of outlets and including a plurality of streamline flow passages between the a plurality of inlets at the leading edge and the a plurality of outlets at the trailing edge.

24. (Currently Amended) The combination of claim 23 ~~including a plurality of stacked discs supported by the spindle assembly and a plurality of wherein the plurality of streamline flow passages of the plurality of flow devices supported relative to the stacked discs include a plurality of opened channels between opposed side edges of the plurality of streamline flow passages.~~

25. (Previously Presented) The combination of claim 23 and further comprising:

a head assembly supporting ~~at least one heads~~ relative to the surfaces of the at least one disc the plurality of discs and the plurality of flow devices is include a flow gate supported upstream of flow of the flow field to the head assembly.

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Concl. 26. (Previously Presented) The combination of claim 23  
and further comprising:

a head assembly supporting ~~at least one heads~~ relative to  
the surfaces of ~~the at least one disc~~ the plurality of  
discs and the plurality of flow devices ~~is include~~ a  
flow gate supported downstream of flow of the flow  
field from the head assembly.

27. (Currently Amended) The combination of claim 23 wherein the  
plurality of flow streamline passages include a plurality of  
radially spaced circumferential flow passages.

28. (Previously Presented) The combination of claim 23 wherein  
the streamline flow streamline passages are ~~angled~~ contoured to  
redirect the  
flow field.

29. (Currently Amended) The ~~disc drive~~ assembly of claim 1 wherein  
the plurality of rows of streamline flow passages include a  
constant cross-sectional area or dimension between the plurality  
of inlets and the plurality of outlets.

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